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# Creating a Firewise Landscape and Defensible Space

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Visualize and map your own property. Resolve that you will leave here today with a plan of action!

California law mandates 100' of defensible space around your house and other structures. You may have to clear an even larger area, depending on your slope:

**slope**

A	0 – 20%	Level – congratulations
B	21 – 40%	Moderate – fairly easy to walk and to work
C	+40%	Steep – a challenge to climb and to clear

## How does your house rank according to one insurance company’s assessment?

Grass, weeds, small shrubs	+1	20 – 40-degree slope	+3	Rough terrain in the area	+1
Shrubs, small trees	+2	+40-degree slope	+4	History of fire in area	+1
Timber woodland	+3	Less than 1 home/10 ac.	+1	Extreme fire weather	+1
1 – 10-degree slope	+1	1 home per 5 - 10 ac.	+2	Good water, roads, signs	-1
10 - 20-degree slope	+2	1 home per 0 – 5 ac.	+3	Strict local fire ordinances	-1

The 3 R’s of Fire Safe Landscaping (courtesy of Sonoma County Fire Safe Council):

### REMOVE, REDUCE, REPLACE

The El Dorado County Fire Safe Council has provided 6 specific steps to creating a firewise landscape and we added 2.

1. Determine your **DEFENSIBLE SPACE**.
2. Remove all **DEAD or DYING** vegetation or material.
3. Break up **CONTINUOUS** vegetation.
4. Eliminate **LADDER FUELS**.
5. Make your defensible space **LEAN, GREEN and CLEAN**.
6. Keep up with regular **MAINTENANCE**.
7. Make your **PLANS**.
8. Use available **RESOURCES**.

### REMOVE

#### STEP 1 - Determine the perimeter of your 100' **DEFENSIBLE SPACE**.

- Identify (and mark) your defensible area.

#### STEP 2 - Remove all **DEAD or DYING** plants and combustible material.

- This also includes firewood, scrap lumber or other flammables.
- Consider clearing all flammable vegetation or hardscape for 5' around your house.

#### STEP 3 - Break up **CONTINUOUS** vegetation.

- Create spaces between existing trees and shrubs.
- Eliminate branches that overhang your roof or chimney
- 10' – 15' spacing, horizontally and vertically, is the minimum.
- Steep slopes require increased clearance between trees and plants.
- Know when and how to hire professional help. (See Resources on page 3.)

## Plant Spacing Guidelines

Guidelines are designed to break the continuity of fuels and be used as a "rule of thumb" for achieving compliance with Regulation 14 CCR 1299.

Trees	Minimum horizontal space from edge of one tree canopy to the edge of the next	
	Slope	Spacing
	0% to 20 %	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
Shrubs	Minimum horizontal space between edges of shrub	
	Slope	Spacing
	0% to 20 %	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
Vertical Space	Minimum vertical space between top of shrub and bottom of lower tree branches: 3 times the height of the shrub	

**NOTE: Fuel Separation distances are measured between the outer edge of the tree or shrubs canopy to the next tree or shrubs outer edge, NOT the trunk or main stem of a tree or shrub.**

Adapted from: Gilmer, M. 1994. California Wildfire Landscaping

### REDUCE

#### STEP 4 - Eliminate **LADDER FUELS**.

- In addition to the 10' vertical clearance under trees, if there are lower plants in the area, the cleared height requirement will increase.
- Chipping may be arranged by calling the EDC Fire Safe Council at 530 626-1700 or signing up on their website (see Resources section).

### REPLACE

#### STEP 5 - Make your space **LEAN, GREEN & CLEAN**.

- Use hardscape and plantings to create fuel breaks.
- Utilize the Hydro-zoning concept, the same principle you use for incorporating drought resistant plants.
  - High water zone is the oasis nearest the house and living area.
  - Moderate water zone includes those plants that require less water.
  - Drought-tolerant plant zone is often further out (+/-100').
- Select fire-resistant plants with:
  - Little or no seasonal accumulation of dead vegetation
  - Open, loose branching habit
  - Non-resinous woody material (for example, avoid juniper, fir and cedar)
  - Low volume of total vegetation
  - High moisture content in leaves
  - Drought tolerance
  - Slow growth, requiring less frequent pruning
- Know your elevation and microclimates as you select plants.
- Use Sunset Western Gardening & websites (see Resources) to select plants for your zone.
- Realize that plants are not fire-proof; they can be fire-resistive.
- Irrigation is a key – understanding its importance is crucial in firewise landscaping. Some plants that are drought tolerant need additional water and pruning of dead wood to be fire-resistant. (see below\*)
- See the resource list for more complete lists of plants. Here are a few suggestions:

#### **Flowers and Groundcovers (\*requires additional water/maintenance)**

California fuschia	penstemon	thrift
candytuft	perennial verbena	woodland strawberry
coreopsis	sedum	yarrow

#### **Shrubs and Vines (\*requires additional water/maintenance)**

California redbud	dwarf burning bush	rock rose
ceanothus	escallonia	serviceberry
<i>Clematis armandii</i>	Oregon grape	star jasmine

## REMOVE, REDUCE, REPLACE (AND REPEAT)

### STEP 6 - MAINTENANCE is crucial.

- Simple, well-maintained landscapes are safer than elaborate landscapes that are neglected.
- Prune deadwood from beneath ground covers and shrubs.
- Clean up ground litter (pine needles & leaves).
- Keep your landscape safe and improve your landscape's appearance at the same time.
- Consider new fire-resistant plants that still add color to your landscape.

And - two more steps...

### STEP 7 - Make your PLANS!

- FOR GETTING STARTED
- FOR HOW TO TACKLE BIG/DANGEROUS JOBS
- FOR AN EMERGENCY

## RESOURCES – THE 4<sup>th</sup> R (\*indicates that hyperlink doesn't work)

### STEP 8 – Make use of RESOURCES.

#### General Fire Wise Info/Agencies

California Dept. of Forestry and Fire Protection	<a href="http://www.fire.ca.gov">www.fire.ca.gov</a>	(530) 644-2345
El Dorado County Fire Safe Council	<a href="http://www.edcfiresafe.org">www.edcfiresafe.org</a>	(530) 647-1700
El Dorado County Fire Protection District	<a href="http://www.eldoradocountyfire.com/">http://www.eldoradocountyfire.com/</a>	(530) 644-9630
Firewise Communities U.S.A.	<a href="http://www.firewise.org">www.firewise.org</a>	
Marin Fire Safe Council	<a href="https://www.firesafemarin.org">https://www.firesafemarin.org</a>	
Oak Hill Fire Safe Council	<a href="http://www.oakhillfiresafe.org">www.oakhillfiresafe.org</a>	
UCCE Master Gardeners of El Dorado County	<a href="http://mgeldorado.ucanr.edu/">http://mgeldorado.ucanr.edu/</a>	(530) 621-5512

#### Books

<u>California Wildfire Landscaping</u>	Maureen Gilmer
<u>Fire, Chaparral, and Survival in Southern California</u>	Richard W. Halsey
<u>Sunset Western Garden Book</u> (for plant zones)	Lane Publishing
<u>The Weather-Resilient Garden</u>	Charles W. G. Smith
<u>Will Your Home Survive?</u>	R. D. Harrell & William C. Teie

#### Plant Lists

Cal Poly SelecTree	<a href="http://selecttree.calpoly.edu/">http://selecttree.calpoly.edu/</a>
California Native Plant Society*	<a href="http://www.cnps.org/cnps/publications/fremontia/Fremontia_Vol38-No2-3.pdf">www.cnps.org/cnps/publications/fremontia/Fremontia_Vol38-No2-3.pdf</a>
CNPS Placer/Nevada	<a href="http://www.redbud-cnps.org/pdf/fire-resistant.pdf">http://www.redbud-cnps.org/pdf/fire-resistant.pdf</a>
Diablo Fire Safe Council Fire Wise	<a href="http://www.diablofiresafe.org/tolerance.html">http://www.diablofiresafe.org/tolerance.html</a>
Fire Resistant Plants for the Cool Area	<a href="http://cecentralsierra.ucanr.edu/files/88247.pdf">cecentralsierra.ucanr.edu/files/88247.pdf</a>
Oak Hill Choose Plants Wisely	<a href="https://www.oakhillfiresafe.org/choose-plants-and-landscaping-wisely">https://www.oakhillfiresafe.org/choose-plants-and-landscaping-wisely</a>
Oregon State Extension Plant List	<a href="http://www.firefree.org/fireresistantplants/">http://www.firefree.org/fireresistantplants/</a>
CNPS Ray Griffith EDC List*	<a href="https://www.eldoradocnps.org/images/gardening/Ray_Griffith_EDC_Native_Plant_List.pdf">https://www.eldoradocnps.org/images/gardening/Ray_Griffith_EDC_Native_Plant_List.pdf</a>
WUCOLS/UC Davis Plant List	<a href="http://ucanr.edu/sites/WUCOLS/Download_WUCOLS_IV_List/">http://ucanr.edu/sites/WUCOLS/Download_WUCOLS_IV_List/</a>

#### Resources and Websites

BC Fire Safe Manual Checklist	<a href="http://www2.gov.bc.ca/gov/content/safety/preparedbc/homeowner/firesnart">www2.gov.bc.ca&gt;embc&gt;preparedbc&gt;homeowner&gt;firesnart</a>
CAL FIRE Ready, Set, Go	<a href="http://www.readyforwildfire.org/">http://www.readyforwildfire.org/</a> plus free phone app
California FAIR Plan (insurance)	<a href="https://einhorninsurance.com/insurance-advice/fire/california-fair-plan/">https://einhorninsurance.com/insurance-advice/fire/california-fair-plan/</a>
Cooperative Extension Nevada	<a href="http://www.livingwithfire.info/">http://www.livingwithfire.info/</a>
Insurance Institute for Safety	<a href="https://www.unce.unr.edu/publications/files/nr/2011/sp1104.pdf">https://www.unce.unr.edu/publications/files/nr/2011/sp1104.pdf</a>
International Society of Arboriculture	<a href="https://disastersafety.org/wildfire/defensible-space/">https://disastersafety.org/wildfire/defensible-space/</a>
UCANR: Preparing your Home:	<a href="http://www.isa-arbor.com">http://www.isa-arbor.com</a>
UCANR Home Landscaping for Fire	<a href="https://ucanr.edu/sites/fire/PrePost/Building/">https://ucanr.edu/sites/fire/PrePost/Building/</a>
UCCE Sustainable/Fire Safety	<a href="https://anrcatalog.ucanr.edu/pdf/8228.pdf">https://anrcatalog.ucanr.edu/pdf/8228.pdf</a>
You Tube National Fire Protection	<a href="https://ucanr.edu/sites/SAFElandscapes">https://ucanr.edu/sites/SAFElandscapes</a>
	<a href="https://www.youtube.com/watch?v=vL_syp1ZScM&amp;feature=youtu.be">https://www.youtube.com/watch?v=vL_syp1ZScM&amp;feature=youtu.be</a>

#### Resources on the Changing Reality of Wildfire in California after the Camp Fire

Does Wildfire Mitigation Work? 16 Examples and Counting! - <https://fireadaptednetwork.org/does-wildfire-mitigation-work-16-examples-and-counting/>

Fire Insurance is Getting Harder to Find - <https://www.mt democrat.com/news/fire-insurance-getting-harder-to-find/>  
KQED Why Wildfire Behavior Depends on What's Burning - [https://www.kqed.org/science/1928625/\\_trashed-35](https://www.kqed.org/science/1928625/_trashed-35)  
The Six Ps of Evacuation - <https://www.theindependencecenter.org/the-six-ps-of-evacuation/>  
The bizarre and frightening conditions that sparked the Camp Fire - <https://buff.ly/2QK2HVz>

### **New Resources and Research**

Burning Down a House - <https://www.insurancejournal.com/news/national/2019/03/20/521093.htm>  
California Ignores the Science - [https://www.latimes.com/california/story/2019-10-06/california-ignores-science-homes-wildfire-zones?fbclid=IwAR0YSvXUCUqHkG4yBr0KOccdQBzNnKLzA6JehP0iOeECRFfG\\_1eOT7xRDJ0](https://www.latimes.com/california/story/2019-10-06/california-ignores-science-homes-wildfire-zones?fbclid=IwAR0YSvXUCUqHkG4yBr0KOccdQBzNnKLzA6JehP0iOeECRFfG_1eOT7xRDJ0)  
Factors Associated with Structure Loss - <https://doi.org/10.3390/fire2030049>  
More about fire-resistant plants - <https://www.sacbee.com/entertainment/living/home-garden/article237252124.html>

### **Suggestions from Carl Hagen – Retired Placerville Insurance Specialist**

Is there anything you can do to make your house more insurable?

1. Make sure you have followed the CAL FIRE requirements – including no laddering.
2. Some companies require you to have 200' clearance or clearance to your property line.

What Words of Wisdom do you have to share with homeowners?

1. It may not matter what you do. You may have to search for another company.
2. Companies are reducing their overall policies in such areas as the foothills and also won't take any additional clients.
3. Consider the California FAIR policy, which only covers fire and has an upper limit, so very expensive houses will not be edible.
4. You will also need the WRAP plan, to cover everything else but fire.
5. Local agents can write both of these policies. Be aware of the actual total coverage, and exactly what and what isn't covered.
6. Don't file "frivolous" claims for things that may not even be covered by your policy. Again, be aware of what exactly is and isn't covered. An example is insect damage (bark beetles in your deck).



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